**commentletters - Recycled Water Draft Policy -- Letter for Members**

**From:** "Hitch, Mary K." <HitchMK@bv.com>
**To:** <commentletters@waterboards.ca.gov>
**Date:** Monday, March 10, 2008 10:10 AM
**Subject:** Recycled Water Draft Policy -- Letter for Members

3/18/08 Bd, Mtg. Item 13
**Recycle Water Policy**
Deadline: 3/10/08 by 12 p.m.

Attached are some comments from Norman Allenby.

**Mary K. Hitch**

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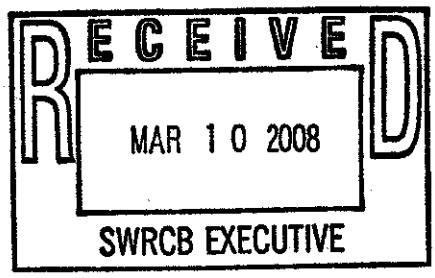
**From:** Norman Allenby [mailto:n.r.allenby@cox.net]
**Sent:** Sunday, March 09, 2008 10:35 PM
**To:** Rasmus, James (Jim); Hitch, Mary K.
**Subject:** Re: Recycled Water Draft Policy -- Letter for Members

Attched are some additional thoughts on reuse that are not addressed by the Recycled Water Draft Policy ...



# ECOLOGICALLY INTEGRATED WATER MANAGEMENT
## The 90% Da Vinci Challenge

Under our present integrated water management system there is insufficient recognition of the potential for on site reuse of water. We have done a great job in corralling water from Imperial County to augment waters received from the Metropolitan Water District. We largely ignore storm water allowing it to contaminate our beaches. We discharge 180 MGD of wastewater into the Pacific Ocean at our Point Loma Treatment facility. We continue to delay the intended use of the North County Reclamation plant's reclaimed water, augmenting San Vicente reservoir. We do distribute a modest amount of reclaimed water for irrigation through our purple pipe system, but our waste water is largely wasted. That waste can be avoided through an ecological approach to water management.

Ecologically integrated water management utilizes process water, storm water and "waste water". It first calculates how much water a facility needs, how much storm water is site available and how much "waste water" is site available. Any deficit between site available water and needs is met by process water purchased from the local provider. The focus of ecological water management is conservation and reuse and yes, more reuse.

In our homes and places of work we presently buy whatever potable water we desire. We drink if we are conscientious maybe eight glasses a day. Of the 200 to 400 gallons a household may use, most of it goes down the drain. Once down the drain, that water becomes wasted, through our waste water facilities. Storm water is directed to streets. The simplest effort of capturing storm water in a cistern for future use is assiduously avoided. That too is wasted. The same is true in urban structures, our schools, office buildings and shopping malls. Our urban watersheds waste waste water.

Leonardo Da Vinci had a relevant thought on this subject. His Ideal City, Postulate # 6 states, "Require that each house have its own sewerage system and be built on aesthetic and environmental principles with access at ground level. The Da Vinci Challenge is to design such a system, not just for homes, but buildings, subdivisions, shopping centers and the micro watersheds that comprise greater San Diego.

There is really very little water used in our homes, rather water is transformed or contaminated. It becomes part of human tissues and plant tissues. Some evaporates. It is contaminated in kitchens, bathrooms, and laundries. Could we remove contaminants from the water or not put them in the water in the first place? Could we create a water cycle that is integral to the home by cleaning the waste water on site?

Let's be blunt. By separating our human wastes in urine separating toilets, low water use toilets or composting toilets (all of which exist), a major contaminant of urban waste water could be avoided. By minimizing or eliminating the garbage disposal additional

water then passes into a series of translucent tanks in which selected plants and microbes break down and metabolize the solids. From theses tanks, the water moves through a clarifier and sand filter to remove any residual solids. This now clear water flows into a constructed wetland, (to be thought of as a large rectangular flower pot) with lots of thirsty hungry plants. There nitrogen, phosphorous and other undesirable elements in the water are removed by the plants, their root systems and assorted microbes. The water, then, as good as most mountain stream water, is disinfected with ultra violet and available for reuse as reclaimed water.

To come full circle, ecologically integrated water management, if adopted and implemented locally would greatly enhance our water independence.

How would we pay for this exercise, perhaps a base rate might pay for the 400 gallons used by each household, with reduced rate for those households which chose to get by on lesser quantities of water. We might even create water credits to sell to our neighbors. For those who chose to use more than an allocated 400 gallons, let them pay accordingly on a graduated scale.

Business must bear its cost as well, but with a 90% return of its waste water, savings on produce water cost might be easily managed.

For the public trust, every gallon of water we recycle is a gallon not imported, a gallon not thrown away plus the energy used to move all that water and waste water around.

Like Nike says, just do it. Leonardo Da Vinci would be proud.